

1           1. An electric heating/warming element comprising:  
2                 a bladder of a water-resistant, vapor-permeable polymeric material;  
3                 an electrical heating/warming circuit extending within said bladder, wherein  
4       said electrical heating/warming circuit generates heat when attached to a source of electrical  
5       power.

1           2. The electric heating/warming element of claim 1, wherein the electrical  
2       heating/warming circuit comprises:  
3                 a fabric body,  
4                 incorporated into said fabric body, in the form of conductive yarn, a plurality  
5       of spaced apart electrical resistance heating elements extending generally between opposite  
6       edge regions of said fabric body, and  
7                 electrical conductor elements extending generally along said opposite edge  
8       regions of said fabric body and adapted to connect said plurality of spaced apart electrical  
9       resistance heating elements to the source of electrical power.

1           3. The electric heating/warming element of claim 2, wherein said electrical conductor  
2       elements are adapted for connecting said plurality of spaced-apart electrical resistance  
3       heating elements to a power source of alternating current.

1           4. The electric heating/warming element of claim 2, wherein said electrical conductor  
2       elements are adapted for connecting said plurality of spaced-apart electrical resistance  
3       heating elements to a power source of direct current.

1           5. The electric heating/warming element of claim 4, wherein said power source of  
2       direct current comprises a battery.

1           6. The electric heating/warming element of claim 2, wherein a series of at least three  
2       electrical resistance heating elements of said plurality of electrical resistance heating  
3       elements are symmetrically spaced.

1           7. The electric heating/warming element of claim 6, wherein a series of at least three  
2       electrical resistance heating elements of said plurality of electrical resistance heating  
3       elements are asymmetrically spaced.

1           8. The electric heating/warming element of claim 2, wherein a series of at least three  
2     electrical resistance heating elements of said plurality of electrical resistance heating  
3     elements are asymmetrically spaced.

1           9. The electric heating/warming element of claim 2, wherein said fabric body  
2     comprises a knitted body.

1           10. The electric heating/warming element of claim 9, wherein said fabric body  
2     comprises a reverse plaited circular knitted body.

1           11. The electric heating/warming element of claim 10, wherein said fabric body has a  
2     technical face formed by a stitch yarn and a technical back formed by a loop yarn.

1           12. The electric heating/warming element of claim 2, wherein said fabric body  
2     comprises a woven body.

1           13. The electric heating/warming element of claim 1, wherein said bladder comprises  
2     a hydrophilic material.

1           14. The electric heating/warming element of claim 1, wherein said bladder comprises  
2     hydrophobic material.

1           15. The electric heating/warming element of claim 1 incorporated into one of an  
2     article of clothing, a heating pad, a blanket, a piece of sports equipment, a medical device and  
3     a textile home furnishing.

1           16. The electric heating/warming element of claim 1, wherein said bladder includes a  
2     first and a second layer, each of which provides an inner surface of the bladder, the electrical  
3     heating/warming circuit being associated with one of said inner surfaces.

1           17. The electric heating/warming element of claim 16, wherein said electrical  
2     heating/warming circuit is printed upon one of said inner surfaces of said bladder.

1           18. The electric heating/warming element of claim 16, comprising a fabric layer  
2     having an inner surface and an outer surface, wherein said first and said second layers of said  
3     bladder comprise:

4 a barrier layer disposed at each of said inner and outer surface of said fabric  
5 layer, said barrier layers each having an inner surface and an outer surface; and  
6 said electrical heating/warming circuit in the form of a flexible film disposed  
7 upon a said inner surface of a said barrier layer.

1 19. The electric heating/warming element of claim 1, wherein said electrical  
2 heating/warming circuit comprises a die-cut sheet-form metalized layer attached to one of a  
3 first and a second broad surface of a fabric body.

1 20. The electric heating/warming element of claim 1, further comprising a phase  
2 change component associated with the bladder and including a phase change material  
3 formulated to change phase in a temperature range of use of the heating/warming element, to  
4 cyclically absorb and release latent heat in a manner capable of conserving use of the  
5 electrical power source.